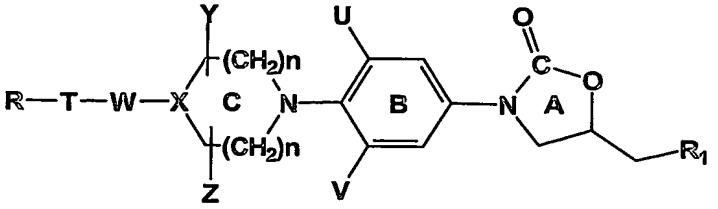
We Claim:

1. Compounds having the structure of Formula 1:



Formula I

and their pharmaceutically acceptable salts, pharmaceutically acceptable solvates, esters, enantiomers, diastereomers, N-oxides, polymorphs, prodrugs or metabolites, wherein

T is a five to seven membered heterocyclic ring, substituted heterocyclic ring, aryl or substituted aryl, bound to the ring **C** with a linker W, and further substituted by a group represented by **R**, wherein R is H, C_{1-6} alkyl, F, Cl, Br, I, –CN, COR_5, $COOR_5$, $N(R_6,R_7)$, $NHCOC(R_8, R_9, R_{10})$, $CON(R_6, R_7)$, CH_2NO_2, NO_2, CH_2R_8, CHR_9, -CH = N-OR_{10}, -C=CH-R_5, OR_5, SR_5, -$C(R_9)$=$C(R_9)NO_2$, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR_4, SR_4, wherein R_4 is hydrogen, alkoxy, aryl, heteroaryl, amines, substituted amines, alkene substituted with aryl, heteroaryl or halogen; R_5 is H, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, aryl, heteroaryl or C_{1-6} alkyl substituted with one or more of F, Cl, Br, I or OH;

R_6 and R_7 are independently H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy;

R_8 and R_9 are independently H, C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR_5, SR_4, or $N(R_6,R_7)$;

R_{10}= H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, aryl or heteroaryl;

n is an integer in the range from 0 to 3;

X is H, CH, CH-S, CH-O, N, $CHNR_{11}$ or CCH_2NR_{11}, wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, C_{1-6} alkylcarbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

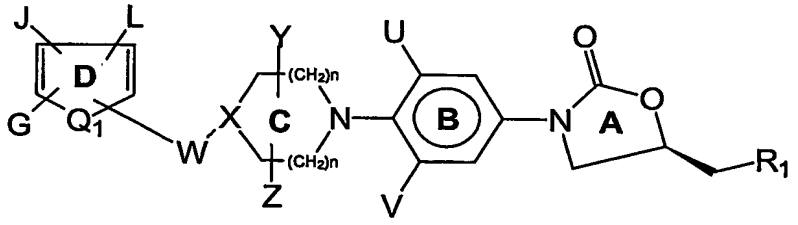
Y and Z are independently hydrogen, C_{1-6} alkyl, C_{3-12} cycloalkyl, C_{0-3} bridging groups;

U and V are independently hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I;

W is CH_2, CO, CH_2NH, $-NHCH_2$, $-CH_2NHCH_2$, $-CH_2$-N $(R_{11})CH_2$-, $CH_2(R_{11})N$-, $CH(R_{11})$, S, $CH_2(CO)$, NH, O, NR_{11}, $(CO)CH_2$, $N(R_{11})CON(R_{11})$, $N(R_{11})C(=S)N(R_{11})$, SO_2 or SO, wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, C_{1-6} alkylcarbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl; and

R_1 is $NHC(=O)R_2$, $NHC(=S)R_2$, $N(R_3, R_4)$, NR_3 or OR_3, wherein R_2, R_3, R_4 are independently hydrogen, thiocarbonyl, amines, substituted amines, aryl heteroaroyl, heterocyclic, aralkyl, aralkenyl, wherein the heteroaryl and heterocylic rings may contain one or more heteroatoms selected from O, S and N; the aryl, heteroaryl, aralkyl and aralkenyl rings may be unsubstituted or substituted with one or more of alkyl, halogen, nitro, amino or methylenedioxy.

2. Compounds having the structure of Formula II:



Formula II

and their pharmaceutically acceptable salts, pharmaceutically acceptable solvates, esters, enantiomers, diastereomers, N-oxides, polymorphs, prodrugs or metabolites, wherein

R_1 is $NHC(=O)R_2$, $NHC(=S)R_2$, $N(R_3, R_4)$, NR_3 or OR_3, wherein R_2, R_3, R_4 are independently hydrogen, thiocarbonyl, amines, substituted amines, aryl heteroaroyl, heterocyclic, aralkyl, aralkenyl, wherein the heteroaryl and heterocylic rings may contain

one or more heteroatoms selected from O, S and N; the aryl, heteroaryl, aralkyl and aralkenyl rings may be unsubstituted or substituted with one or more of alkyl, halogen, nitro, amino or methylenedioxy;

U and V are independently hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I;

Y and Z are independently hydrogen, C_{1-6} alkyl, C_{3-12} cycloalkyl, C_{0-3} bridging group;

X is H, CH, CH-S, CH-O, N, $CHNR_{11}$ or CCH_2NR_{11}, wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl carbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

W is CH_2, C=O, CH_2NH, $NHCH_2$, CH_2NHCH_2, $CH_2N(R_{11})CH_2$, $CH_2N(R_{11})$, $CH(R_{11})$, S, $CH_2(C=O)$, NH, O, $(CO)CH_2$, $N(R_{11})CON(R_{11})$, SO_2, SO, NR_{11}, $N(R_{11})C(=S)N(R_{11})$; wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl carbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

n is an integer in the range from 0 to 3;

Q_1 is O, S or NR_{11}, wherein R_{11} is as defined above;

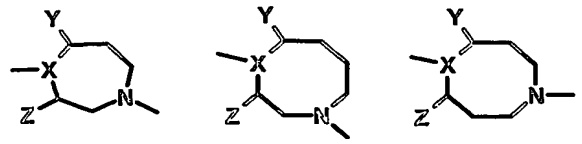
G, J, L are independently H, C_{1-6} alkyl, F, Cl, Br, I, –CN, COR_5, $COOR_5$, $N(R_6,R_7)$, $NHCOC(R_8, R_9, R_{10})$, $CON(R_6, R_7)$, CH_2NO_2, NO_2, CH_2R_8, CHR_9, -CH = N-OR_{10}, -C=CH-R_5, OR_5, SR_5, $-C(R_9)=C(R_9)NO_2$, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR_4, SR_4, wherein R_4 is as defined above; R_5 is H, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, aryl or heteroaryl; C_{1-6} alkyl substituted with one or more of F, Cl, Br, I or OH;

R_6 and R_7 are independently H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl or C_{1-6} alkoxy;

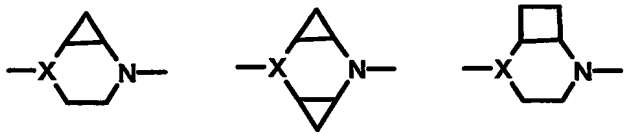
R_8 and R_9 are independently H, C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR_5, SR_4, $N(R_6,R_7)$; and

R_{10}= H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, aryl or heteroaryl.

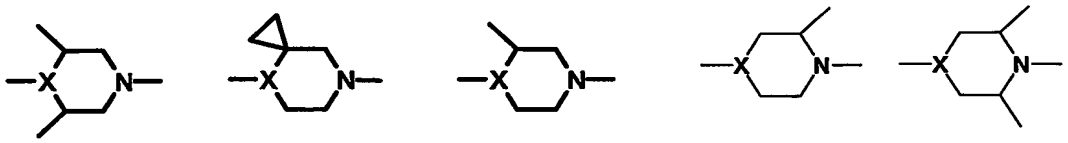
3. The compound according to claim 2 wherein in Formula II, ring C is 6-8 membered in size and the ring may have either two or three carbon atoms between each nitrogen atom comprising of:



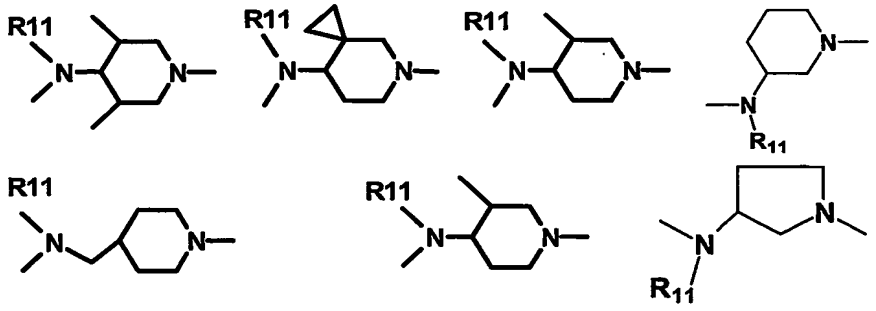
and the ring C may be bridged to form a bicyclic system as shown below:



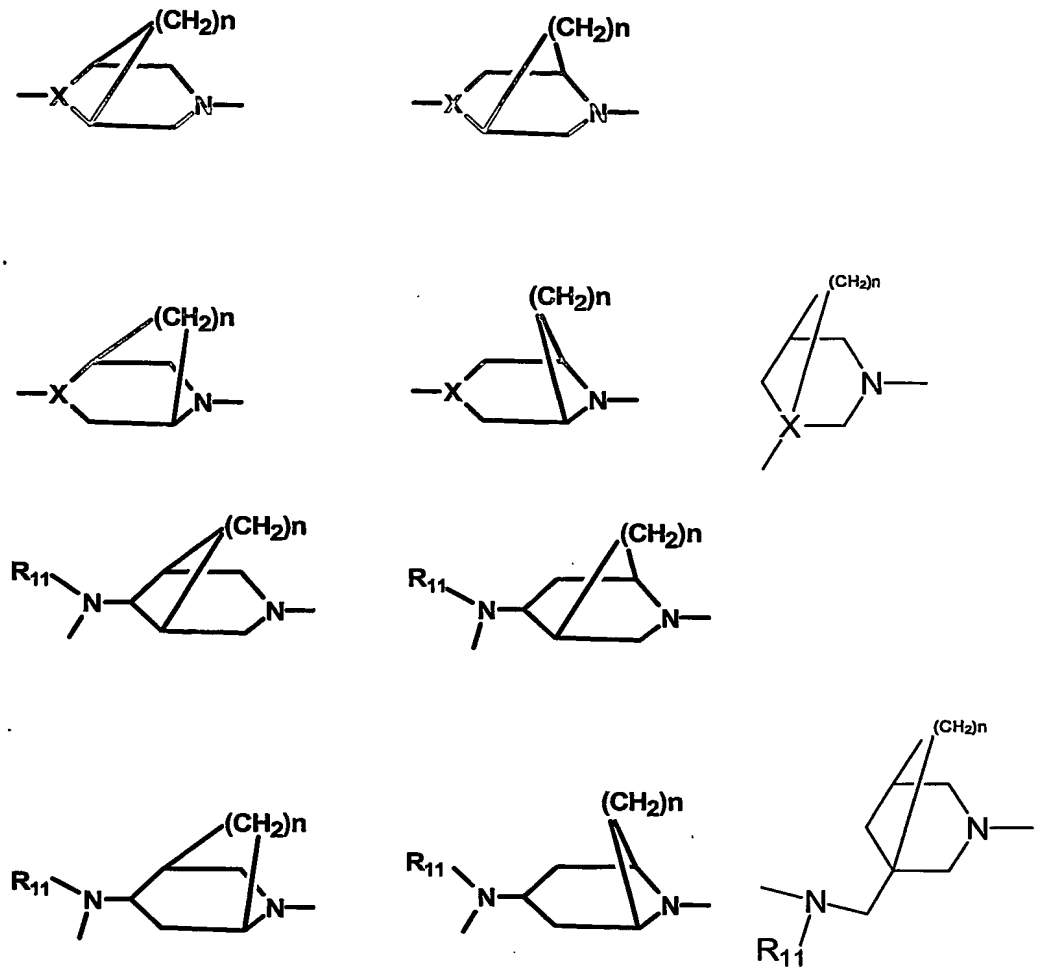
4. The compound according to claim 2 wherein in Formula II, ring C is substituted at positions Y and Z with alkyl groups, cycloalkyl groups, fluoro group, carboxylic and corresponding esters, amides, substituted alkyls or bridging alkyl groups as shown below:



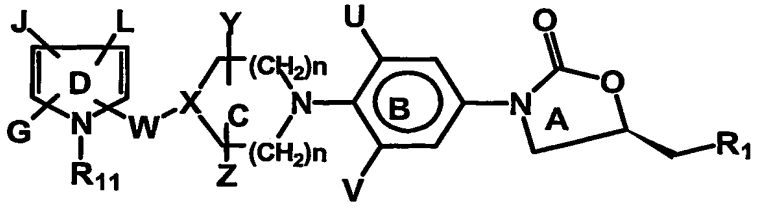
5. The compound according to claim 2 wherein in Formula II, ring C is 6 membered in size and X is -CH-(NHR_{11}), or >CCH_2NHR_{11}-, the ring C is selected from the group consisting of the following rings wherein R_{11} is the same as defined earlier,



or in addition to the above, the ring C includes the following structures:



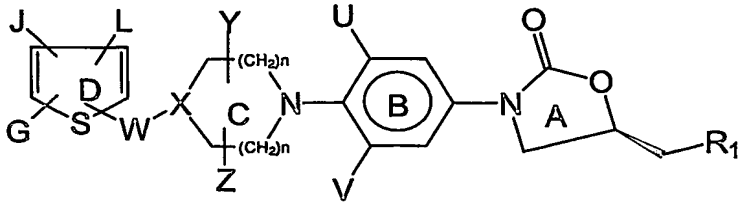
6. The compound according to claim 2 having the structure of Formula III:



Formula III

wherein U, V, Y, Z, X, W, G, J, L, R_1, R_{11} and n are as defined earlier.

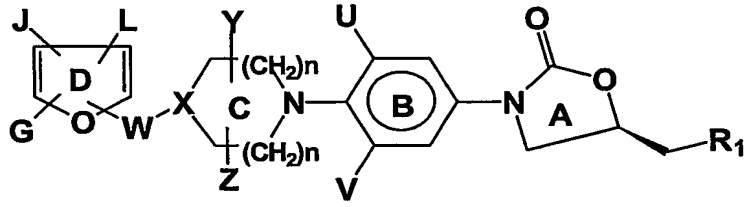
7. The compound according to claim 2 having the structure of Formula IV:



Formula IV

wherein U, V, Y, Z, X, W, G, J, L, R_1 and n are as defined earlier.

8. The compound according to claim 2 having the structure of Formula V:



Formula V

wherein U, V, X, Y, Z, W, G, J, L, R_1 and n are as defined earlier.

9. A compound selected from the group consisting of :

(S)-N-[[3-[3-Fluoro-4-[N-1-[4-{2-furyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]-3-(2,4-dichlorophenyl)acrylamide (Compound No. 1)

(S)-N-[[3-[3-Fluoro-4-[N-1-[4-{2-furyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]-3-(4-fluorophenyl)acrylamide (Compound No. 2)

(S)-N-[[3-[3-Fluoro-4-[N-1-[4-{2-furyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]-2-benzo(b)furanamide (Compound No. 3)

(S)-N-[3-[3-Fluoro-4-[N-1-[4-{2-furyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methylamine (Compound No. 4)

(S)-N-[[3-[3-Fluoro-4-[N-1-[4-{2-furyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]-3-(phenyl)acrylamide (Compound No. 5)

(S)-N-[[3-[3-Fluoro-4-[N-1-[4-{2-furyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]-3-(1,3-benzodioxol-5-yl)acrylamide (Compound No. 6)

(S)-N-[[3-[3-Fluoro-4-[N-1-[4-{2-thienyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]-3-(4-fluorophenyl)acrylamide (Compound No. 7)

(S)-N-[[3-[3-Fluoro-4-[N-1-[4-{2-thienyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]-3-(4-nitrophenyl)acrylamide (Compound No. 8)

(S)-N-[[3-[3-Fluoro-4-[N-1-[4-{2-thienyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]-3-(2,4-dichlorophenyl)acrylamide (Compound No.9)

(S)-N-[1-[[3-[3-Fluoro-4-[N-1-[4-{2-furyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]]-thiourea (Compound No. 10)

(S)-N-[[3-[3-Fluoro-4-[N-1-[4-{2-thienyl-(5-nitro)methyl}]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl]isothiocyanate (Compound No. 11)

(S)-N-[1-[[3-[3-Fluoro-4-[N-1-[4-{2-thienyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]]-thiourea (Compound No. 12)

(S)-N-[[3-[3-Fluoro-4-[N-1-[4-{2-furyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]isothiocyanate (Compound No. 13)

5(S)-Isoxazol-3-yl-oxymethyl-3-[3-fluoro-4-[4-[(4-bromo-5-nitro-2-thienyl) methyl]piperazinyl-1-yl]phenyl]oxazolidin-2-one (Compound No. 14)

5(S)-Isoxazol-3-yl-oxymethyl-3-[3-fluoro-4-[4-[(5-nitro-2-furyl)methyl] piperazinyl-1-yl]phenyl]oxazolidin-2-one (Compound No. 15)

5(S)-Isoxazol-3-yl-oxymethyl-3-[3-fluoro-4-[4-[(5-nitro-2-thienyl) methyl]piperazinyl-1-yl]phenyl]oxazolidin-2-one (Compound No. 16)

(S)-N-[1-[[3-[3-Fluoro-4-[N-1-[4-{2-furyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]]3,3-dimethyl-thiourea (Compound No. 17)

(S)-N-[3-[3-Fluoro-4-[N-1-[4-{2-thienyl-(5-nitro)methyl}] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methylamine (Compound No. 18)

10. A pharmaceutical composition comprising the compound of claims 1, 2 or 9 and a pharmaceutical acceptable carrier.

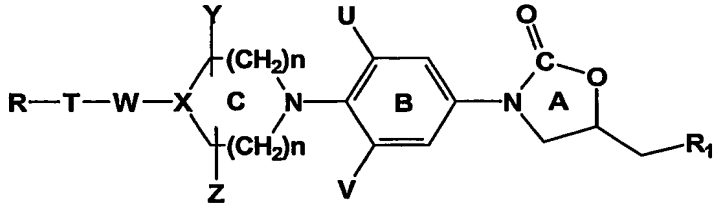
11. A pharmaceutical composition comprising a pharmaceutically effective amount of compound according to claims 1, 2 or 9 or a physiologically acceptable acid addition salt thereof with a pharmaceutical acceptable carrier for treating microbial infections.

12. A method of treating or preventing microbial infections in a mammal comprising administering to the said mammal, the pharmaceutical composition according to claim 11.

13. The method according to claim 12 wherein the microbial infections are caused by gram-positive and gram-negative bacteria.

14. The method according to claim 13, wherein the gram-positive bacteria are selected from the group consisting of staphylococcus spp., streptococuus spp., bacillus spp., corynebacterum spp., clostridia spp., peptostreptococus spp., listeria spp. and legionella spp.

15. A method of treating or preventing aerobic and anaerobic bacterial infections in a mammal comprising administering to said mammal, a therapeutically effective amount of a compound having the structure of Formula I



Formula I

and its pharmaceutically acceptable salts, pharmaceutically acceptable solvates, esters, enantiomers, diastereomers, N-oxides, polymorphs, prodrugs or metabolites, wherein

T is a five to seven membered heterocyclic ring, substituted heterocyclic ring, aryl or substituted aryl, bound to the ring **C** with a linker W, and is further substituted by a group represented by **R**, wherein R is H, C_{1-6} alkyl, F, Cl, Br, I, –CN, COR_5, $COOR_5$, $N(R_6,R_7)$,

$NHCOC(R_8, R_9, R_{10})$, $CON(R_6, R_7)$, CH_2NO_2, NO_2, CH_2R_8, CHR_9, -CH = N-OR_{10}, -C=CH-R_5, OR_5, SR_5, $-C(R_9)=C(R_9)NO_2$, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR_4, SR_4, wherein R_4 is hydrogen, alkoxy, aryl, heteroaryl, amines, substituted amines, alkene substituted with aryl, heteroaryl or halogens; R_5 is H, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, aryl or heteroaryl; C_{1-6} alkyl substituted with one or more of F, Cl, Br, I or OH;

R_6 and R_7 are independently H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy;

R_8 and R_9 are independently H, C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR_5, SR_4, or $N(R_6,R_7)$;

R_{10}= H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, aryl or heteroaryl;

n is an integer in the range from 0 to 3;

X is H, CH, CH-S, CH-O, N, $CHNR_{11}$ or CCH_2NR_{11}, wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, C_{1-6} alkylcarbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

Y and **Z** are independently hydrogen, C_{1-6} alkyl, C_{3-12} cycloalkyl, C_{0-3} bridging groups;

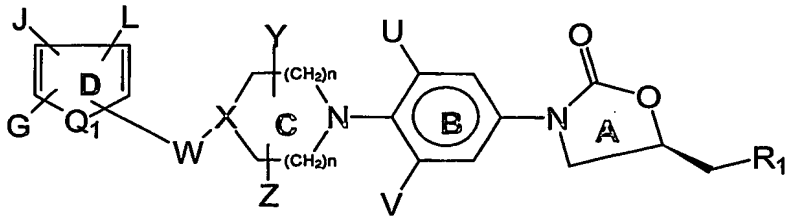
U and **V** are independently hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I;

W is CH_2, CO, CH_2NH, $-NHCH_2$, $-CH_2NHCH_2$, $-CH_2$-N $(R_{11})CH_2$-, $CH_2(R_{11})$N-, $CH(R_{11})$, S, $CH_2(CO)$, NH, O, NR_{11}, $(CO)CH_2$, $N(R_{11})CON(R_{11})$, $N(R_{11})C(=S)N(R_{11})$, SO_2 or SO; wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, C_{1-6} alkylcarbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl; and

R_1 is $NHC(=O)R_2$, $NHC(=S)R_2$, $N(R_3, R_4)$, NR_3 or OR_3, wherein R_2, R_3, R_4 are independently hydrogen, thiocarbonyl, amines, substituted amines, aryl heteroaroyl, heterocyclic, aralkyl, aralkenyl, wherein the heteroaryl and heterocylic rings may contain one or more heteroatoms selected from O, S and N; the aryl, heteroaryl, aralkyl and

aralkenyl rings may be unsubstituted or substituted with one or more of alkyl, halogen, nitro, amino or methylenedioxy.

16. A method of treating or preventing aerobic and anaerobic bacterial infections in a mammal comprising administering to said mammal, a therapeutically effective amount of a compound having the structure of Formula II:



Formula II

and its pharmaceutically acceptable salts, pharmaceutically acceptable solvates, esters, enantiomers, diastereomers, N-oxides, polymorphs, prodrugs or metabolites, wherein

R_1 is $NHC(=O)R_2$, $NHC(=S)R_2$, $N(R_3, R_4)$, NR_3 or OR_3, wherein R_2, R_3, R_4 are independently hydrogen, thiocarbonyl, amines, substituted amines, aryl heteroaroyl, heterocyclic, aralkyl, aralkenyl, wherein the heteroaryl and heterocylic rings may contain one or more of heteroatoms selected from O, S and N; the aryl, heteroaryl, aralkyl and aralkenyl rings may be unsubstituted or substituted with one or more of alkyl, halogen, nitro, amino or methylenedioxy;

U and **V** are independently hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I;

Y and **Z** are independently hydrogen, C_{1-6} alkyl, C_{3-12} cycloalkyl, C_{0-3} bridging group;

X is H, CH, CH-S, CH-O, N, $CHNR_{11}$ or CCH_2NR_{11}, wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl carbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

W is CH_2, C=O, CH_2NH, $NHCH_2$, CH_2NHCH_2, $CH_2N(R_{11})CH_2$, $CH_2N(R_{11})$, $CH(R_{11})$, S, $CH_2(C=O)$, NH, O, $(CO)CH_2$, $N(R_{11})CON(R_{11})$, SO_2, SO, NR_{11}, $N(R_{11})C(=S)N(R_{11})$; wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl carbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

n is an integer in the range from 0 to 3;

Q_1 is O, S or NR_{11}, wherein R_{11} is as defined earlier;

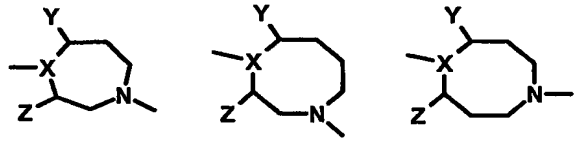
G, J, L are independently H, C_{1-6} alkyl, F, Cl, Br, I, –CN, COR_5, $COOR_5$, $N(R_6,R_7)$, $NHCOC(R_8, R_9, R_{10})$, $CON(R_6, R_7)$, CH_2NO_2, NO_2, CH_2R_8, CHR_9, -CH = N-OR_{10}, -C=CH-R_5, OR_5, SR_5, $-C(R_9)=C(R_9)NO_2$, C_{1-12} alkyl substituted with one or more F, Cl, Br, I, OR_4, SR_4, wherein R_4 is as defned above; R_5 is H, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, aryl or heteroaryl; C_{1-6} alkyl substituted with one or more of F, Cl, Br, I or OH;

R_6 and R_7 are independently H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl or C_{1-6} alkoxy;

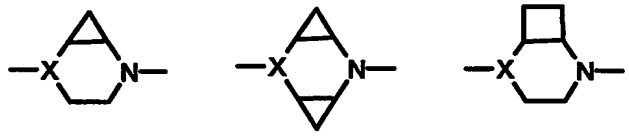
R_8 and R_9 are independently H, C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR_5, SR_4, $N(R_6,R_7)$; and

R_{10}= H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, aryl or heteroaryl.

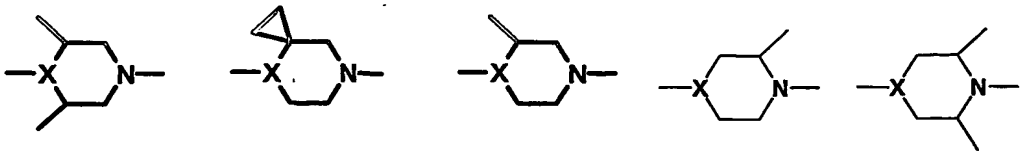
17. The method according to claim 16 wherein in Formula II, ring C is 6-8 membered in size and the ring may have either two or three carbon atoms between each nitrogen atom comprising of:



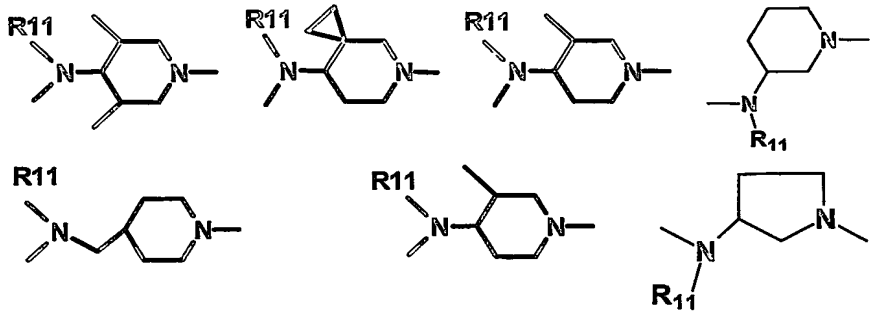
and ring C may be bridged to form a bicyclic system as shown below:



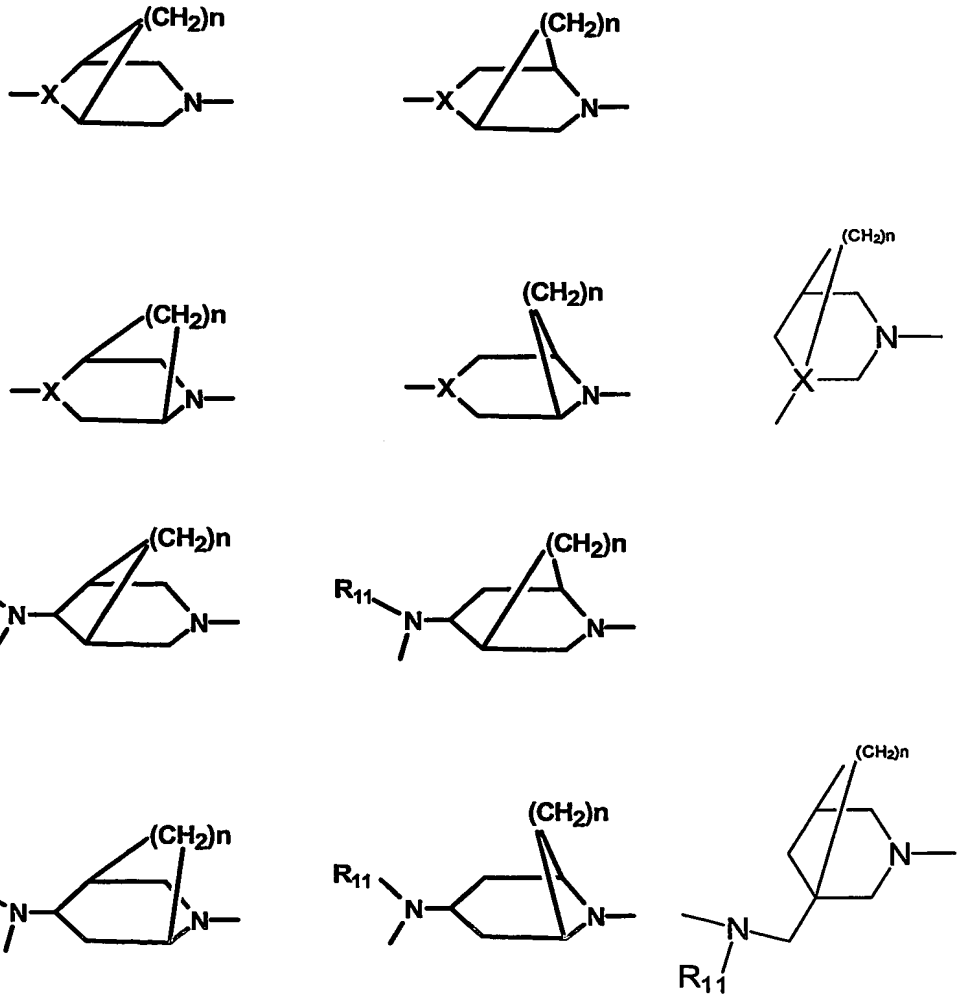
18. The method according to claim 16 wherein in Formula II, ring C is substituted at positions Y and Z with alkyl groups, cycloalkyl groups, fluoro group, carboxylic and corresponding esters, amides, substituted alkyls or bridging alkyl groups as shown below:



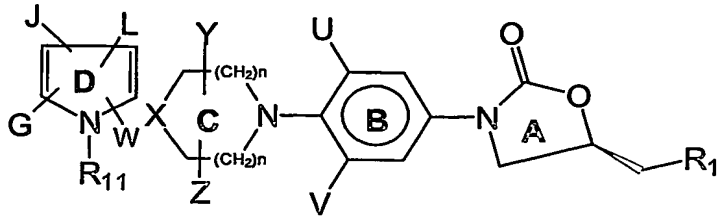
19. The method according to claim 16 wherein in Formula II, ring C is 6 membered in size and X is -CH-(NHR_{11}), or >CCH_2NHR_{11}-, the ring C is selected from the group consisting of the following rings wherein R_{11} is the same as defined earlier,



or in addition to the above, the ring C includes the following structures:



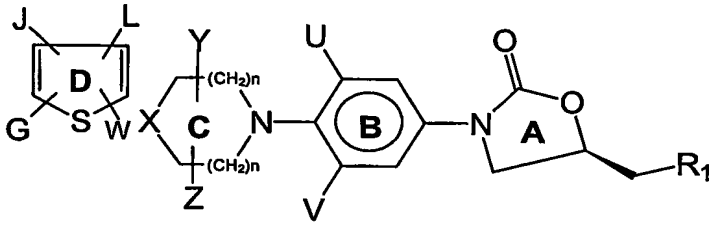
20. The method according to claim 16 having the structure of Formula III,



FORMULA III

wherein U, V, Y, Z, W, X, G, J, L, R_1, R_{11} and n are as defined earlier.

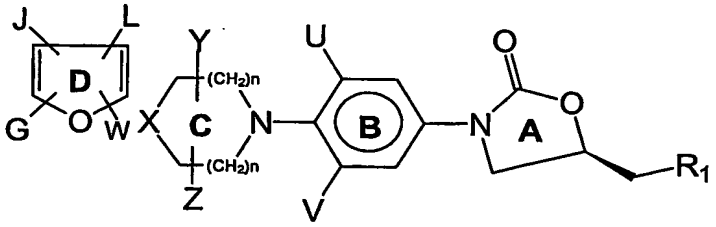
21. The method according to claim 16 having the structure of Formula IV,



FORMULA IV

wherein U, V, Y, Z, W, X, G, J, L, R_1 and n are as defined earlier.

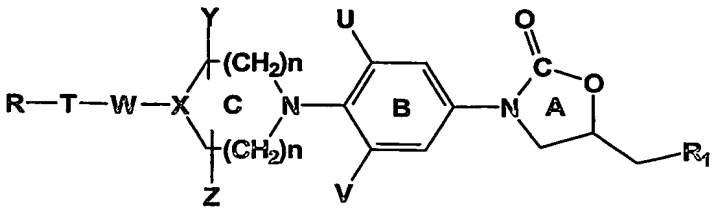
22. The method according to claim 16 having the structure of Formula V,



FORMULA V

wherein U, V, X, Y, Z, W, G, J, L, R_1 and n are as defined earlier.

23. A process for preparing a compound of Formula I,



Formula I

and its pharmaceutically acceptable salts, pharmacecltically acceptable solvates, esters, enantiomers, diastereomers, N-oxides, polymorphs, prodrugs or metabolites, wherein

T is a five to seven membered heterocyclic ring, substituted heterocyclic ring, aryl or substituted aryl, bound to the ring **C** with a linker W, and is further substituted by a group represented by **R**, wherein R is H, C_{1-6} alkyl, F, Cl, Br, I, –CN, COR_5, $COOR_5$, $N(R_6,R_7)$, $NHCOC(R_8, R_9, R_{10})$, $CON(R_6, R_7)$, CH_2NO_2, NO_2, CH_2R_8, CHR_9, -CH = N-OR_{10}, -C=CH-R_5, OR_5, SR_5, $-C(R_9)=C(R_9)NO_2$, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR_4, SR_4, wherein R_4 is hydrogen, alkoxy, aryl, heteroaryl, amines, substituted amines, alkene substituted with aryl, heteroaryl or halogens; R_5 is H, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, aryl or heteroaryl; C_{1-6} alkyl substituted with one or more of F, Cl, Br, I or OH;

R_6 and R_7 are independently H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy;

R_8 and R_9 are independently H, C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR_5, SR_4, or $N(R_6,R_7)$;

R_{10}= H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, aryl or heteroaryl;

n is an integer in the range from 0 to 3;

X is H, CH, CH-S, CH-O, N, $CHNR_{11}$ or CCH_2NR_{11}, wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, C_{1-6} alkylcarbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

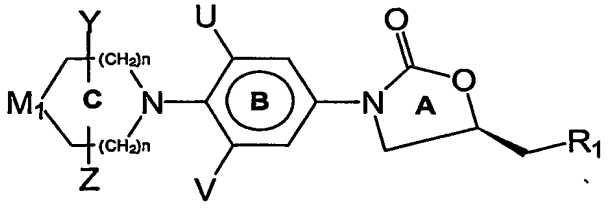
Y and **Z** are independently hydrogen, C_{1-6} alkyl, C_{3-12} cycloalkyl, C_{0-3} bridging groups;

U and **V** are independently hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I;

W is CH_2, CO, CH_2NH, $-NHCH_2$, $-CH_2NHCH_2$, $-CH_2$-N $(R_{11})CH_2$-, $CH_2(R_{11})N$-, $CH(R_{11})$, S, $CH_2(CO)$, NH, O, NR_{11}, $(CO)CH_2$, $N(R_{11})CON(R_{11})$, $N(R_{11})C(=S)N(R_{11})$, SO_2 or SO; wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, C_{1-6} alkylcarbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl; and

R_1 is $NHC(=O)R_2$, $NHC(=S)R_2$, $N(R_3, R_4)$, NR_3 or OR_3, wherein R_2, R_3, R_4 are independently hydrogen, thiocarbonyl, amines, substituted amines, aryl heteroaroyl, heterocyclic, aralkyl, aralkenyl, wherein the heteroaryl and heterocylic rings may contain one or more heteroatoms selected from O, S and N; the aryl, heteroaryl, aralkyl and aralkenyl rings may be unsubstituted or substituted with one or more of alkyl, halogen, nitro, amino or methylenedioxy;

which comprises reacting an amine of Formula VI,

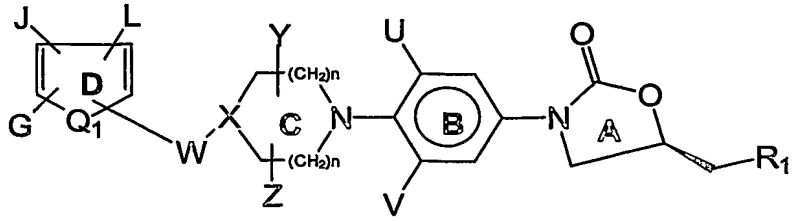


Formula VI

with a heteroaromatic compound of Formula R-T-W-R_{12} wherein R, T, W, R_1, Y, Z, U, V and n are as defined earlier and M_1 is NH, NHR_{13}, $CHNHR_{13}$, $-CHCH_2NHR_{13}$, $-CCH_2NHR_{13}$, wherein R_{13} is H, ethyl, methyl, isopropyl, acetyl, cyclopropyl, alkoxy or acetyl and R_{12} is a suitable leaving group selected from the group consisting of fluoro, chloro, bromo, iodo, SCH_3, $-SO_2CH_3$, $-SO_2CF_3$, Tos, OC_6H_5, -COOH or –CHO.

24. The process of claim 23, wherein the amine of Formula VI reacts with a heteroaromatic compound of Formula R-T-W-R_{12} in the presence of a base selected from the group consisting of potassium carbonate, N-ethyl diisopropylamine and dipotassium hydrogen phosphate.

25. A process for preparing a compound of Formula II,



Formula II

and its pharmaceutically acceptable salts, pharmaceutically acceptable solvates, esters, enantiomers, diastereomers, N-oxides, polymorphs, prodrugs or metabolites, wherein

R_1 is $NHC(=O)R_2$, $NHC(=S)R_2$, $N(R_3, R_4)$, NR_3 or OR_3, wherein R_2, R_3, R_4 are independently hydrogen, thiocarbonyl, amines, substituted amines, aryl heteroaroyl, heterocyclic, aralkyl, aralkenyl, wherein the heteroaryl and heterocylic rings may contain one or more of heteroatoms selected from O, S and N; the aryl, heteroaryl, aralkyl and aralkenyl rings may be unsubstituted or substituted with one or more of alkyl, halogen, nitro, amino or methylenedioxy;

U and **V** are independently hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more F, Cl, Br, I;

Y and **Z** are independently hydrogen, C_{1-6} alkyl, C_{3-12} cycloalkyl, C_{0-3} bridging group;

X is H, CH, CH-S, CH-O, N, $CHNR_{11}$ or CCH_2NR_{11}, wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl carbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

W is CH_2, C=O, CH_2NH, $NHCH_2$, CH_2NHCH_2, $CH_2N(R_{11})CH_2$, $CH_2N(R_{11})$, $CH(R_{11})$, S, $CH_2(C=O)$, NH, O, $(CO)CH_2$, $N(R_{11})CON(R_{11})$, SO_2, SO, NR_{11}, $N(R_{11})C(=S)N(R_{11})$; wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl carbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

n is an integer in the range from 0 to 3;

Q_1 is O, S or NR_{11}, wherein R_{11} is as defined earlier;

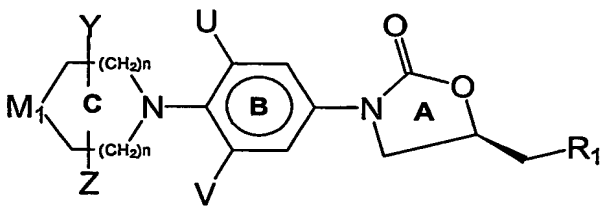
G, J, L are independently H, C_{1-6} alkyl, F, Cl, Br, I, –CN, COR_5, $COOR_5$, $N(R_6,R_7)$, $NHCOC(R_8, R_9, R_{10})$, $CON(R_6, R_7)$, CH_2NO_2, NO_2, CH_2R_8, CHR_9, -CH = N-OR_{10}, -C=CH-R_5, OR_5, SR_5, $-C(R_9)=C(R_9)NO_2$, C_{1-12} alkyl substituted with one or more F, Cl, Br, I, OR_4, SR_4, wherein R_4 is as defined above; R_5 is H, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, aryl or heteroaryl; C_{1-6} alkyl substituted with one or more of F, Cl, Br, I or OH;

R_6 and R_7 are independently H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl or C_{1-6} alkoxy;

R_8 and R_9 are independently H, C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR_5, SR_4, $N(R_6,R_7)$; and

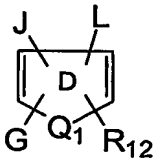
R_{10}= H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, aryl or heteroaryl;

comprising reacting a compound of Formula VI,



Formula VI

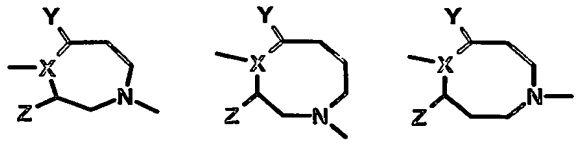
with a heteroaromatic compound of Formula VII,



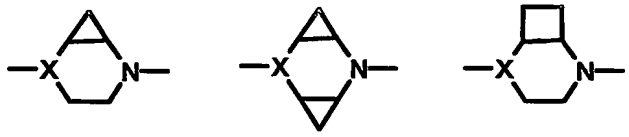
Formula VII

wherein R_1, U, V, Y, Z, G, J, L and Q_1 are as defined earlier and M_1 is NH, NHR_{13}, $CHNHR_{13}$, $-CHCH_2NHR_{13}$, $-CCH_2NHR_{13}$, wherein R_{13} is H, ethyl, methyl, isopropyl, acetyl, cyclopropyl, alkoxy or acetyl and R_{12} is a suitable leaving group selected from the group consisting of fluoro, chloro, bromo, iodo, SCH_3, $-SO_2CH_3$, $-SO_2CF_3$, Tos, OC_6H_5, -COOH or –CHO.

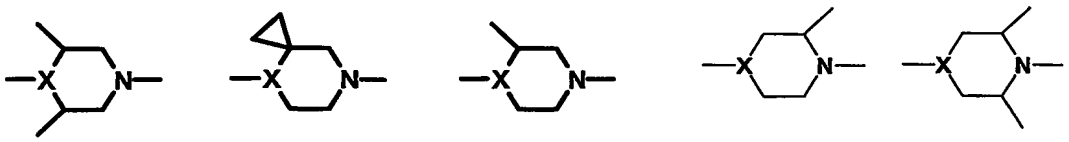
26. The process according to claim 25 wherein in Formula II, ring C is 6-8 membered in size and the ring may have either two or three carbon atoms between each nitrogen atom comprising of:



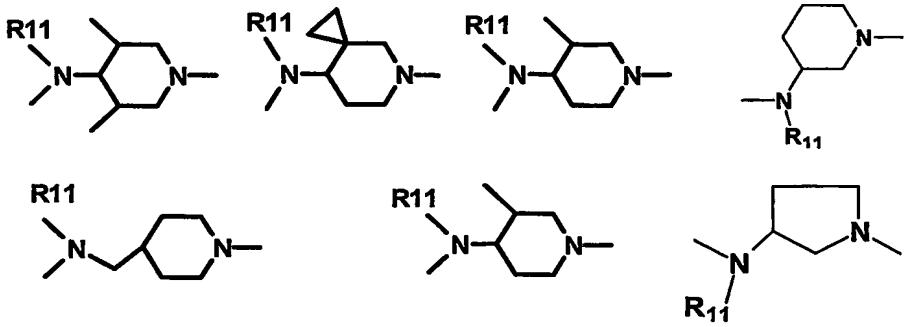
and ring C may be bridged to form a bicyclic system as shown below:



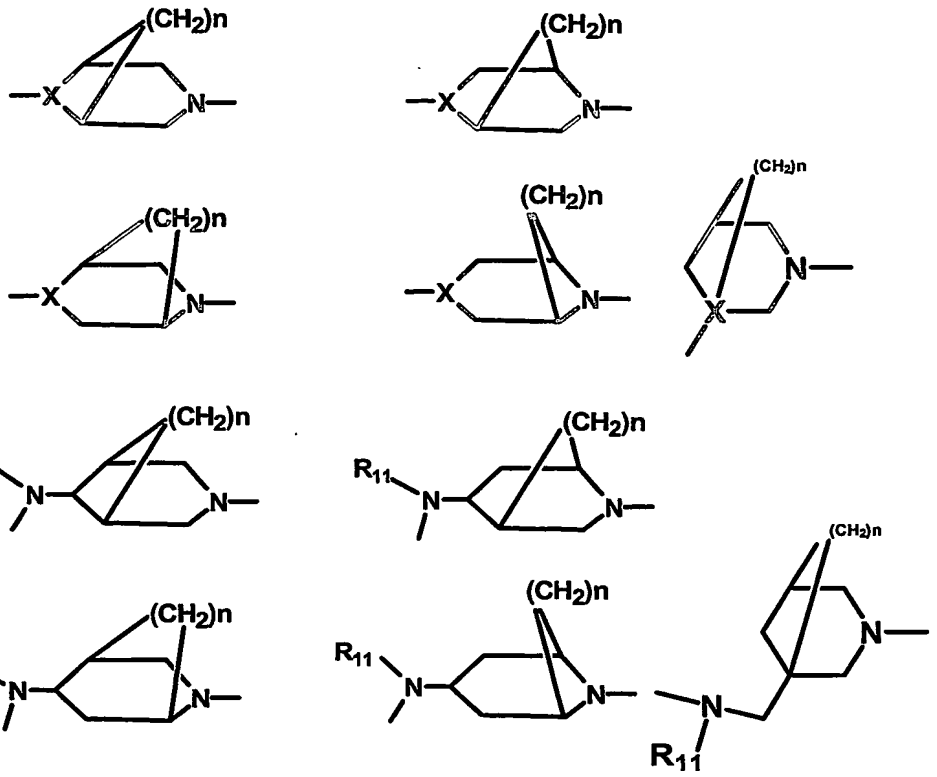
27. The process according to claim 25 wherein in Formula II, ring C is substituted at positions Y and Z with alkyl groups, cycloalkyl groups, fluoro group, carboxylic and corresponding esters, amides, substituted alkyls or bridging alkyl groups as shown below:



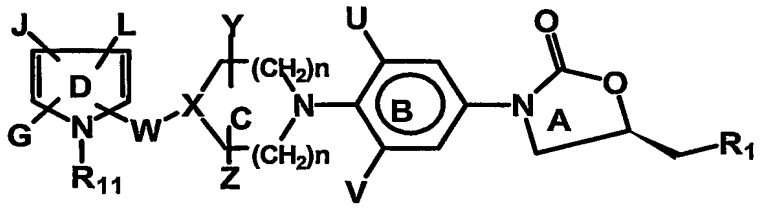
28. The process according to claim 25 wherein in Formula II, ring C is 6 membered in size and X is -CH-(NHR_{11}), or >CCH_2NHR_{11}-, the ring C is selected from the group consisting of the following rings wherein R_{11} is the same as defined earlier,



or in addition to the above, the ring C includes the following structures:



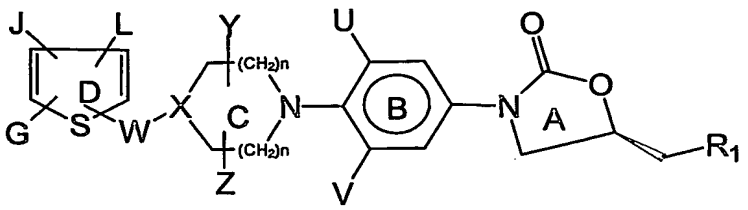
29. The process according to claim 25 having the structure of Formula III,



Formula III

wherein U, V, Y, Z, W, X, G, J, L, R_1, R_{11} and n are as defined above.

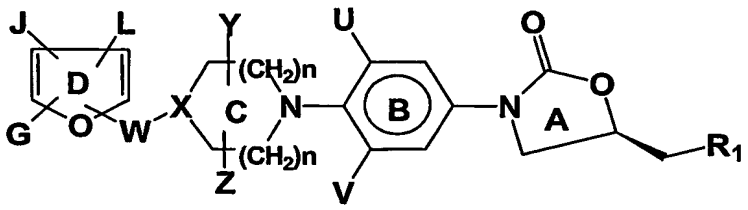
30. The process according to claim 25 having the structure of Formula IV,



Formula IV

wherein U, V, Y, Z, W, X, G, J, L, R_1 and n are as defined earlier.

31. The process according to claim 25 having the structure of Formula V,



Formula V

wherein U, V, X, Y, Z, W, G, J, L, R_1 and n are as defined earlier.

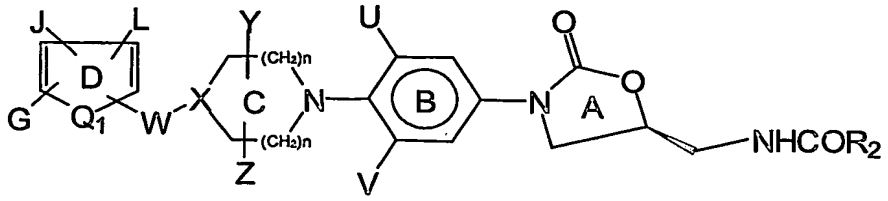
32. The process according to claim 25 wherein the reaction is carried out in the presence of ligands selected from the group consisting of tris(dibenzylideneacetone)dipalladium ($Pd_2(dba)_3$) and palladium diacetate ($Pd(OAc)_2$).

33. The process according to claim 25 wherein the heteroaromatic compound of Formula VII is 3-bromothiophene.

34. The process according to claim 25 wherein the reaction of compound of Formula VI with a compound of Formula VII is carried out in a suitable solvent selected from the group consisting of dimethylformamide, dimethylacetamide, acetonitrile, dimethylsulfoxide and ethylene glycol.

35. The process according to claim 25 wherein the reaction of compound of Formula VI with a compound of Formula VII is carried out in the presence of a suitable base selected from the group consisting of triethylamine diisopropylethylamine, potassium carbonate, sodium carbonate and dipotassium hydrogenphosphate.

36. A process of preparing a compound of Formula X



Formula X

and its pharmaceutically acceptable salts, pharmaceutically acceptable solvates, esters, enantiomers, diastereomers, N-oxides, polymorphs, prodrugs or metabolites, wherein

R_2 is hydrogen, thiocarbonyl, amines, substituted amines, aryl heteroaryl, heterocyclic, aralkyl, aralkenyl, wherein the heteroaryl and heterocylic rings may contain one or more heteroatoms selected from O, S and N; the aryl, heteroaryl, aralkyl and aralkenyl rings may be unsubstituted or substituted with one or more of alkyl, halogen, nitro, amino or methylenedioxy;

U and **V** are independently hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I;

Y and **Z** are independently hydrogen, C_{1-6} alkyl, C_{3-12} cycloalkyl, C_{0-3} bridging group;

X is H, CH, CH-S, CH-O, N, $CHNR_{11}$ or CCH_2NR_{11}, wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl carbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

W is CH_2, C=O, CH_2NH, $NHCH_2$, CH_2NHCH_2, $CH_2N(R_{11})CH_2$, $CH_2N(R_{11})$, $CH(R_{11})$, S, $CH_2(C=O)$, NH, O, $(CO)CH_2$, $N(R_{11})CON(R_{11})$, SO_2, SO, NR_{11}, $N(R_{11})C(=S)N(R_{11})$; wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl carbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

n is an integer in the range from 0 to 3;

Q_1 is O, S or NR_{11}, wherein R_{11} is as defined earlier;

G, J, L are independently H, C_{1-6} alkyl, F, Cl, Br, I, –CN, COR_5, $COOR_5$, $N(R_6,R_7)$, $NHCOC(R_8, R_9, R_{10})$, $CON(R_6, R_7)$, CH_2NO_2, NO_2, CH_2R_8, CHR_9, -CH = N-OR_{10}, -

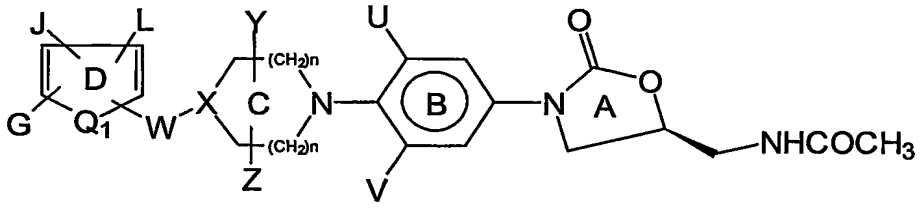
$C=CH-R_5$, OR_5, SR_5, $-C(R_9)=C(R_9)NO_2$, C_{1-12} alkyl substituted with one or more F, Cl, Br, I, OR_4, SR_4, wherein R_4 is as defined above; R_5 is H, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, aryl or heteroaryl; C_{1-6} alkyl substituted with one or more of F, Cl, Br, I or OH;

R_6 and R_7 are independently H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl or C_{1-6} alkoxy;

R_8 and R_9 are independently H, C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR_5, SR_4, $N(R_6,R_7)$; and

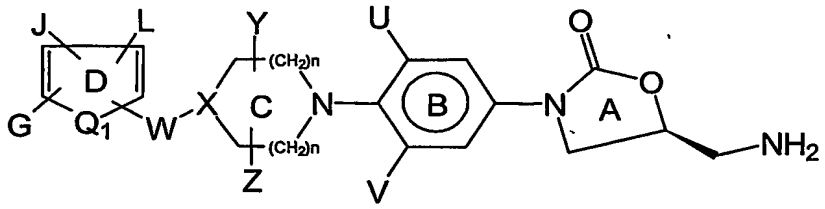
R_{10}= H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, aryl or heteroaryl;

comprising hydrolyzing the compound of Formula VIII,



Formula VIII

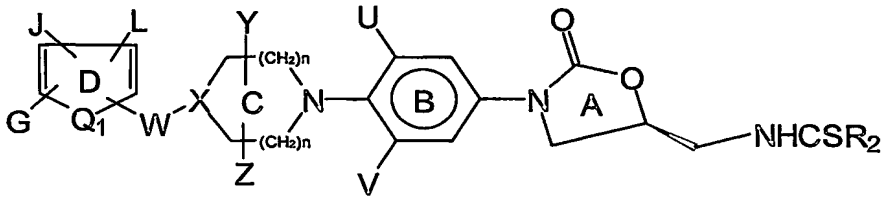
to give the amine of Formula IX,



Formula IX

which on reaction with aryl carboxylic acids gives the amide of Formula X.

37. A process of preparing a compound of Formula XII



Formula XII

and its pharmaceutically acceptable salts, pharmaceutically acceptable solvates, esters, enantiomers, diastereomers, N-oxides, polymorphs, prodrugs or metabolites, wherein

R_2 is hydrogen, thiocarbonyl, amines, substituted amines, aryl heteroaryl, heterocyclic, aralkyl, aralkenyl, wherein the heteroaryl and heterocylic rings may contain one or more heteroatoms selected from O, S and N; the aryl, heteroaryl, aralkyl and aralkenyl rings may be unsubstituted or substituted with one or more of alkyl, halogen, nitro, amino or methylenedioxy;

U and **V** are independently hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I;

Y and **Z** are independently hydrogen, C_{1-6} alkyl, C_{3-12} cycloalkyl, C_{0-3} bridging group;

X is H, CH, CH-S, CH-O, N, $CHNR_{11}$ or CCH_2NR_{11}, wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl carbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

W is CH_2, C=O, CH_2NH, $NHCH_2$, CH_2NHCH_2, $CH_2N(R_{11})CH_2$, $CH_2N(R_{11})$, $CH(R_{11})$, S, $CH_2(C=O)$, NH, O, $(CO)CH_2$, $N(R_{11})CON(R_{11})$, SO_2, SO, NR_{11}, $N(R_{11})C(=S)N(R_{11})$; wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl carbonyl, C_{1-6} alkylcarboxy, aryl or heteroaryl;

n is an integer in the range from 0 to 3;

Q_1 is O, S or NR_{11}, wherein R_{11} is as defined earlier;

G, J, L are independently H, C_{1-6} alkyl, F, Cl, Br, I, –CN, COR_5, $COOR_5$, $N(R_6,R_7)$, $NHCOC(R_8, R_9, R_{10})$, $CON(R_6, R_7)$, CH_2NO_2, NO_2, CH_2R_8, CHR_9, -CH = N-OR_{10}, -

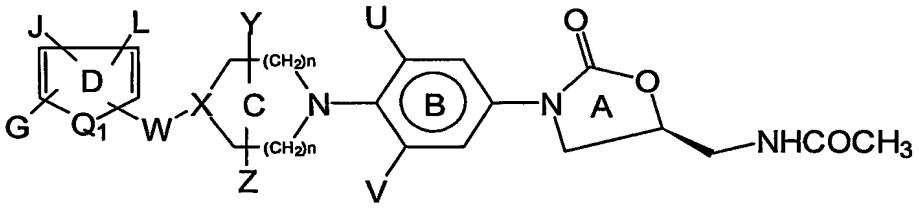
C=CH-R_5, OR_5, SR_5, -$C(R_9)$=$C(R_9)NO_2$, C_{1-12} alkyl substituted with one or more F, Cl, Br, I, OR_4, SR_4, wherein R_4 is as defined above; R_5 is H, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, aryl or heteroaryl; C_{1-6} alkyl substituted with one or more of F, Cl, Br, I or OH;

R_6 and R_7 are independently H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl or C_{1-6} alkoxy;

R_8 and R_9 are independently H, C_{1-6} alkyl, F, Cl, Br, I, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR_5, SR_4, $N(R_6,R_7)$; and

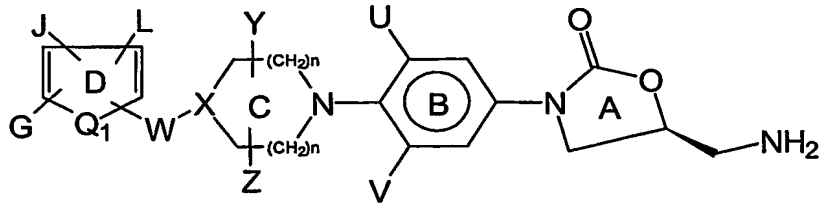
R_{10}= H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, aryl or heteroaryl;

comprising hydrolyzing the compound of Formula VIII,



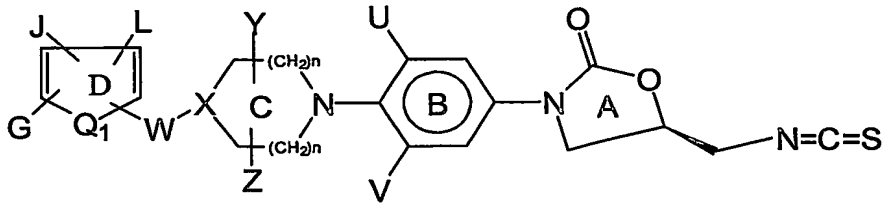
Formula VIII

to give the amine of Formula IX,



Formula IX

which is reacted with carbon disulfide and ethylchloroformate to give the coresponding isothiocyanates of Formula XI,



Formula XI

which is further reacted with (un) substituted amines to give the thiourea of Formula XII.

38. The process according to claim 36, wherein the conversion of amine of Formula IX to the amide of Formula X is carried out in the presence of condensing agents selected from the group consisting of 1,3-dicyclohexyl carbodiimide (DCC) and 1-(3-dimethylamino propyl)-3-ethyl carbodiimide hydrochloride (EDC).

39. The process according to claim 37, wherein the reaction of isothiocyanates of Formula XI with (un) substituted amine is carried out in a suitable solvent selected from the group consisting of dimethylformamide, dimethylacetamide, dichloromethane and tetrahydrofuran.

40. The process according to claim 37, wherein the reaction of isothiocyanates of Formula XI with (un) substituted amines is carried out at a temperature range of about -70°C to about 180°C.

41. The process according to claim 37, wherein the reaction of isothiocyanates of Formula XI with (un) substituted amine is carried out in the presence of a suitable base selected form the group consisting of triethylamine, diisopropylamine, potassium carbonate and sodium carbonate.